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Abstract

The aim of the study was to investigate the relationship between locus of control and achievement in second language learning, when using reading and listening as the measure of success of the learners. The study was conducted on a pilot group of 102 university students, enrolled in a master's degree course at a university in Poland. The students were asked to complete the Drwal 29-question test of locus of control and a number of reading and listening tests to complete over an extended period of time in order to gain a reliable overview of their levels of achievement. The results, somewhat against the run of expectation, indicated that there was no apparent correlation – either positive or negative – between the orientation of locus of control of the participants and achievement. This goes against the conventional assumption that there should be some form of negative correlation, as previous research indicates that successful learners in an academic environment are more likely than not to have an inwardly orientated locus of control.

Keywords: *locus of control, receptive skills, Second Language Acquisition*

Introduction

In the 1950s and 1960s psychology sought to investigate the notion of attribution in educational processes, whereby this concept was understood as to whom the subjects ascribed their educational successes and failures, and behaviourists

such as B.F. Skinner sought to identify how such processes worked. At the same time, such notions as hopelessness were also the subject of much scientific interest. From this, psychologists such as Rotter and Phares developed the notion of a sense of perceived control – later to become **locus of control** (LOC).¹ The concept is best defined by Rotter (1966:2) himself who states that:

“In social theory, reinforcement acts to strengthen an expectancy that a particular behaviour or event will be followed by the reinforcement in the future. Once an expectancy for such a behaviour-reinforcement sequence is built up the failure of the reinforcement to occur will reduce or extinguish the expectancy. As an infant develops and acquires more experience he differentiates events which are causally related to preceding events and those which are not. It follows as a general hypothesis that when the reinforcement is seen as not contingent upon the subject’s own behavior that its occurrence will not increase an expectancy as much as when it is seen as contingent. Conversely, its nonoccurrence will not reduce any expectancy so much as when it is seen as contingent. It seems likely that, depending upon the individual’s history of reinforcement, individuals would differ in the degree to which they attributed reinforcement to their own actions.”

From this lengthy definition, we can see that LOC is the sense of how far one feels that one is responsible for one’s own actions – a psychological construction based on the proverbial bad workman and his tools. It is a concept based on an internal-external scale, of which Rotter and Phares 1957 were the pioneers of measurement and interpretation.

Locus of control in SLA

The area of psychological interest, and of crucial importance to the present study, is the issue of the relationship between locus of control and achievement in SLA. An excellent study to use as a point of entry would be that conducted by Madeline Ehrman, et al. (2003:321), in which it is stated that one of the essential components of a highly motivated learner is an internal LOC, and also that learners with high levels of internal attribution have a strong sense of self-efficacy, and correspondingly higher levels of achievement (Hsieh and Schallert, 2008). Additionally, Williams and Burden (1997) place LOC within their complex motivational mechanism alongside goal setting and locus of causality, echoing Ehrman’s claim that an internal LOC is an essential constituent part of high motivation.

¹ Cf., Lefcourt (2010:19–31) for a full description of the evolution of Locus of Control as a distinct psychological concept.

What is interesting here is that, despite the fact that locus of control as a psychological concept has been generally accepted since the mid-1960s, there remains a paucity of empirical research which seeks to investigate the relationship between LOC and achievement in SLA.² In an “early” study by Bonny Peirce, Merrill Swain and Doug Hart 500 13-year-old children were examined on their perception of the difficulty of certain tasks while involved in a French immersion program in Canada in order to investigate the relationship between self-assessment and LOC. The results indicated that those with an internal LOC were more likely to have a “realistic” understanding of the level of difficulty of certain tasks (Peirce et al., 1993), but there was no reference made to levels of achievement and the orientation of the learner’s LOC. More recently, a number of studies have been conducted which seek to shed light on the influence of LOC on achievement in SLA. Kenneth Williams and Melvin Andrade investigated the relationship between LOC and anxiety in a population of 243 Japanese university students taking English as a foreign language subsidiary course. They concluded that levels of anxiety increased during exercises focusing on output, and that there was a strong statistical correlation between high levels of anxiety and internal LOC – in this case, the learners often attributed their stress to either the teacher or their peers (Williams and Andrade, 2008:181–188). Cynthia White conducted a longitudinal study on the change in expectations of “novice” self-instructed language learners, concluding that an internal LOC was a key predictor of success in autonomous learning (White, 1999). In a study on the motivational role of drama in language teaching, Gałązka demonstrated that through the use of drama as a teaching method, Polish high-school students underwent an increase in levels of internal LOC and were correspondingly more motivated to learn English with a resultant increase in levels of achievement (Gałązka, 2008:77–95).

This aside, a battery of recent investigations conducted in Iran have focused on the direct relationship between orientation of LOC and achievement in SLA. In Ghonsooly and Shirvan (2011) a positive correlation was demonstrated between internal LOC and achievement in reading and writing during the investigation of 136 students of English in Iranian universities. Fakeye (2011) sought to investigate the correlation between general achievement and LOC using an adapted version of a Locus of Control Scale developed by Araromi and a 50-question multiple

² This may be due to the fact that a number of studies have proven the link between an internal LOC and high levels of academic achievement (cf., Rotter, 1966; Lefcourt, 2010; Deci and Ryan, 1985; Drwal, 1989; Smith, 1989 and Hrbáková, Hladík and Vavrova, 2012, among other studies into this relationship).

choice test of grammar and vocabulary (Fakeye, 2011:550). The results indicated that there was no significant statistical relationship between LOC orientation and average score in the test. One methodological issue that seems to arise from this study is that Fakeye treats LOC as a polarised dichotomous feature. The question would be in what way it was possible to simply divide the sample into two groups (internal and external) given that most LOC scales are arranged according to at least three levels – internal, external and indeterminate. Another study by Eslami-Rasekh, Rezaei and Davoudi (2012) also indicated that there was no statistical correlation between the orientation of LOC and achievement in school language tests. An investigation into the relationship between LOC and the score in university entrance tests by Ghabanchi and Golparvar (2011) came to the somewhat unsurprising conclusion that those with an internal LOC had higher scores than those with an external orientation. Rastegar, Heidari and Razmi (2013), entered into a more ambitious investigation in which they sought to show the interrelationship between LOC, test anxiety and religious orientation. It was shown in their results that there was a significant statistical correlation between external LOC and high levels of test anxiety, and a corresponding negative relationship between internal LOC and anxiety (Rastegar et al., 2013:110). In a more significant experiment by Najva Nejabati, it was shown that when a group of B2 level university students were subject to training to internalise LOC, not only did the mean orientation of the experimental group change in the post-experiment LOC test, but also the experimental group achieved a greater level of improvement over a four-week period than the control group (Nejabati, 2014). Such experiments are of great interest as they indicate the clear need for further investigation into the role of LOC in SLA, but they also highlight the difficulties in treating any phenomenon in isolation.

We may therefore conclude a number of things based upon the few studies which have been conducted within the field of SLA on LOC. Primarily, it would appear that the results of surveys on the relationship between academic achievement and LOC are reflected by a corresponding relationship between achievement and internal LOC in language learning (cf., Gałazka, 2008; Ghonsooly and Shirvan, 2011; and Ghabanchi and Golparvar, 2011 as exemplary studies). In addition to this, an orientation towards external LOC is empirically linked to increased levels of anxiety which, as mentioned previously, is correlated with lower levels of achievement (cf., Williams and Andrade, 2008 or Rastegar et al., 2013). Furthermore, an internal LOC is considered as an essential prerequisite for successful autonomous learning; crucial in terms of language acquisition, which takes place in an informal environment (White, 1999). One further positive conclusion

pertaining to LOC is that it is clearly a variable, and manipulation of this trait can bring about a positive change in levels of achievement (cf., Gałązka, 2008 or Nejabati, 2014). One further point to stress here is that it would appear that at lower levels of proficiency it might be possible to draw the tentative conclusion that the orientation of LOC is less important than at more advanced levels of proficiency as lower-level learning is more dependent upon the teacher, and the same is almost certainly true of those involved in more formalised educational environments (such as high school), where the nature of learning is, to a large extent, dictated by the instructor.

Research Methodology

When one considers Locus of Control (LOC), there is clear evidence to link an internally orientated LOC to enhanced academic results (Crandall et al., 1965; Chance, 1965; Lessing, 1969; Nowicki and Roundtree, 1971; Nowicki and Segal, 1974; Smith, 1989; Lefcourt, 2010; or Hrbackova, Hladik and Vavrova, 2012), to a meta-analysis of 36 independent studies conducted by Bar-Tal and Bar-Zohar (1977), indicating that only one study provided contradictory findings. Thus, one may safely assume that LOC is a strong predictor of academic achievement in a general sense. From the perspective of SLA, the research has, to date, been rather meagre, but White (1999) and Hsieh and Schallert (2008) demonstrated a link between an internal LOC and levels of achievement (not to forget here the previously mentioned studies conducted in Iran).

Research Questions and Hypothesis

Taking the above theoretical assumptions into consideration, the following main research questions were posed, taking results in reading and listening comprehension exercises to be the dependent variable, and locus of control as being the independent variable:

1. Is there a relationship between orientation of locus of control and performance in listening tasks?
2. Is there a relationship between orientation of locus of control and performance in reading tasks?

In addition to the two main research questions, the following specific questions were addressed:

1. What is the general orientation of locus of control of the population?

2. Is there a discrepancy between male and female orientation of locus of control?
3. What is the relationship between reading and listening achievement in the sample population?

The above questions and the theoretical assumptions allowed for the formulation of the following hypothesis:

1. There should be a negative correlation between locus and control and the level of performance.

The participants in the study were 102 master's degree students at the University of Rzeszow enrolled in the Institute of English Studies. The reason for choosing students at a Polish university was to try to achieve the highest level of homogeneity possible in order to exclude certain influential variables from consideration. The instruments used were the Drwal 29-question test of orientation of LOC and a variety of listening and reading exercises at the C2 level.

Results

Before entering into a detailed discussion of the results, a brief explanation is necessary in order to provide some clarity to understanding the information contained below. For the purpose of accuracy of calculations, and because of the relatively small population size, it was decided that instead of creating an arbitrary internal/external dichotomy – which would seem extremely inadvisable as the test envisages that those scoring 14–15 points are unclassified – the scores were retained on a scale of 1 to 29, in which case the higher the value, the more externally orientated the LOC. This then allows for the use of the results from the Drwal test to be utilised parametrically, which provides greater accuracy and clarity of reporting. Listening and reading scores have been expressed as percentages based on the calculation of the cumulative statistical mean of each of the participants.

To begin with the establishment of a general picture, Table 1 shows the mean scores of the results of the three areas of investigation (LOC, reading and listening) presented in terms of the overall population and then divided into males and females.

Starting with some general observations, the average reading score for the population as a whole was 73.93%, with the females on average scoring 73.01% and the males 76.62%. For listening, the average score across the population was 71.32%, with the males again scoring slightly higher than the group average with 74.30% and the females scoring 70.28%. The average score on the Drwal Locus of Control

Table 1. Averages from listening, reading and LOC

	Gender	avarage reading %	avarage listening %	LOC (1–29)
F	MEAN	73.01	70.28	14.51
	MEDIAN	73.50	72.50	14.00
	N	76	76	76
	STANDARD DEVIATION	16.275	14.578	4.110
	MINIMUM	40	30	4
	MAXIMUM	100	96	23
M	MEAN	76.62	74.38	13.81
	MEDIAN	73.50	75.50	14.00
	N	26	26	26
	STANDARD DEVIATION	10.241	9.745	4.454
	MINIMUM	57	56	6
	MAXIMUM	96	95	26
GENERAL	MEAN	73.93	71.32	14.33
	MEDIAN	73.50	74.00	14.00
	N	102	102	102
	STANDARD DEVIATION	15.004	13.585	4.189
	MINIMUM	40	30	4
	MAXIMUM	100	96	26
Mann-Whitney u test (p)		.265	.392	.286

Scale was 14.33, with the males having a slightly more internally orientated LOC at 13.81 than the females, 14.51. The Mann-Whitney *u* test³ was conducted in order to establish the statistical significance of the results. As $p > 0.05$, it is necessary to state that the results, while applicable to the study population, would not be valid for extrapolation onto the wider population.

³ In a situation where the variables are expressed in ordinal terms, the Mann-Whitney *u* test is applied in order to determine the statistical significance of the data set. The *p*-value greater than 0.05 indicates that the results are valid only for the test population and may not be applied on a wider scale (cf., Bedyńska and Brzezicka, 2007:203–207).

Table 2. Performance of population with extreme orientation of LOC

LOC (1–29)		average listening %	average reading %
4–8	Mean	71.67	68.22
	Median	78.00	57.00
	N	9	9
	Standard deviation	17.168	21.672
	Minimum	44	43
	Maximum	91	96
21–26	Mean	76.00	78.44
	Median	77.00	75.00
	N	9	9
	Standard deviation	12.777	10.309
	Minimum	54	63
	Maximum	96	94
Total	Mean	73.83	73.33
	Median	77.00	74.50
	N	18	18
	Standard deviation	14.849	17.283
	Minimum	44	43
	Maximum	96	96
Mann-Whitney u test		.796	.387

With the extremities of the LOC population, it is immediately obvious that there is no difference in the size of the populations: 9 people have a score on the Drwal SRT test of 4–8 points and 9 people scored 21–26. In the case of both listening and reading scores, those with the more externally orientated LOC have a higher average, but the only significant difference is in the average reading score, with the upper group scoring 10.22 percentage points more. What is even more interesting here is that when one examines the difference in median reading score, which would be entirely justified given the level of standard deviation, there is an 18% difference, which is significant in terms of the general levels of harmony of the remainder of the statistics.

Discussion

It makes sense to begin the discussion by returning to the research questions. The first of the minor questions pertains to the general orientation of LOC of the overall population, which comes out at a statistical mean of 14.33 (with the median score of 14). This actually comes out slightly higher than the research study into graduates conducted by Zaidi and Mohsin (2013:18), although this research is nothing more than a rough guideline as it was conducted on a Pakistani population, but one would expect a slightly lower mean as the generally accepted tendency is for those involved in higher education to have a tendency towards an internal LOC (cf., Hsieh and Schallert, 2008). The second element of the mean calculation is that there is no significant difference between the male and female sections of the population, and when one takes into account the mode, both populations scored 14.00. While it is true that the population was skewed in terms of female presence (the ratio being 76:26 female to male), this reflects the typical makeup of a Philological course in a Polish institute of higher education, and thus no effort was made to “balance out” the populations, as it was felt that this would provide an artificial perspective (cf., Pritchard, 1987). Interestingly, when one analyses the correlation between the reading and listening results for the participants, the Spearman rho coefficient for the total population is 0.444, which may be classed as a strong correlation in statistical terms. This is interesting from the point of view that one would expect reading and listening abilities to differ slightly as it is commonly accepted that such skills are not entirely dependent on the level of competence in L2, but rather they are strongly correlated with L1 abilities, meaning that there would be a less clear relationship – as can be seen when one analyses the male population, and the Spearman rho coefficient is just 0.039, which indicates absolutely no correlation whatsoever.

To move on to the correlations between LOC and reading and listening performance, the Spearman rho coefficient for LOC and average reading score was 0.105, while the corresponding score for listening was -0.027. In both cases these results indicate, at the very best, an extremely weak correlation between LOC and achievement. Even when one breaks down the population along gender lines, the conclusions one draws must be the same: there would appear to be, at least in the current research population, absolutely no correlation between the orientation of LOC of the learner and results in reading and listening skills.

Conclusions

There is a slightly greater cause for optimism when we examine the results of the extreme cases, whereby the listening results for the internally and externally orientated were very similar (71.67% and 76.00% respectively), whereas for the reading results, we can see the beginning of a clear discrepancy, those with an internally orientated LOC scored a mean 68.22 %, while the externals scored 78.44 %. This represents a 10 percentage point shift, but not in the direction one would expect, whereby internally orientated learners should perform better. Obviously, as these results are based on the analysis of the performance of 18 individuals, they are in no way compelling, as suggested by the fact that the Mann-Whitney test indicates that the results lack statistical significance, but they do provide food for thought, in the sense that a larger-scale investigation is clearly desirable in order to shed further light on the subject. For now, we shall simply conclude that, contrary to our initial expectations, it would appear, on the basis of the present study at least, that LOC is not a reliable predictor of achievement in foreign language reading and writing.

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